tion or possibly only slight impairment of voluntary movement of the same side, as indicative of a certain stage of peripheral facial palsy. I have observed this phenomenon especially in slight facial weakness resulting from the pressure of a tumor of the cerebellopontile angle upon the facial nerve. The movement of the face normally is less intense in smiling or crying than in showing the teeth, and, therefore, a slight paresis of the facial nerve might cause loss of these emotional movements on one side of the face, and the weakness might be overcome by the forcible effort made to contract the lower part of the face in showing the teeth. The case was one referred to me by Dr. W. H. Snyder and Dr. Louis Miller, of Toledo, Ohio, October 23, 1910. In smiling the man drew up the right side of the face strongly and the left side weakly, but in showing the teeth or drawing up the corners of the mouth separately, the left facial weakness was slight. Dr. C. H. Frazier operated and found a tumor in the left cerebellopontile angle pressing upon the facial nerve.

It is important to recognize that this form of dissociation of facial movement may be the first sign of weakness of the facial nerve from pressure of a cerebellopontile angle tumor, and in connection with slight nerve deafness may be of localizing value. It is possible that the impairment of emotional movement may result, in part at least, from the pressure of the tumor upon the medulla oblongata and pons. I am unable to determine at present whether or not the impairment of emotional movement of the face occurs in most cases of tumor of the cerebellopontile angle.

THE RELATIONSHIP BETWEEN ERYTHEMA NODOSUM AND TUBERCULOSIS, WITH THE REPORT OF A CASE.

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Erythema nodosum has been variously regarded as a simple variety of erythema multiforme, as a definite specific contagious disease (Paulouch, Oppert, Batigne et al.), and as a secondary manifestation in many differing conditions, such as the infectious diseases, drug ingestion, alimentary disturbances, and nervous diseases.

Jouillié divided erythema nodosum into two classes—primary or so-called idiopathic and those secondary to infectious diseases, certain drugs and nervous disorders. In 1872 to 1878 Uffelman and Oehme reported some observations from which they concluded that tuberculosis was frequently a cause of erythema nodosum.

Cases reported by Schmitz, Comby, Oppert, Goldscheider, Buisine, Levy, Schamaun, Poncet, and others, have shown an association between erythema nodosum and tuberculosis. More recently Troisier and Chauffard, in France, and Otto Brian, in Germany have discussed the correlation of erythema nodosum and tuberculosis. Mlle. A. Pérel in her "Thèse pour le Doctorat en Médecine" discusses the relationship between erythema nodosum and tuberculosis, citing a number of cases from the literature and from her own experience, in which there was apparently a definite connection between the appearance of the erythema nodosum and a concomitant or subsequent tuberculosis.

Hildebrandt injected 5 c.c. of venous blood, taken from patients suffering from erythema nodosum, into the peritoneal cavity of guinea-pigs and succeeded in producing tuberculous lesions in them. Otto Brian repeated the experiment of Hildebrandt and was able, in one case, to infect 3 guinea-pigs with tuberculosis by injecting them with the venous blood taken from a patient with erythema nodosum. In all the other cases, however, in which this experiment was tried, he failed to infect a single animal. Chauffard and Troisier were able to produce an experimental erythema nodosum by the "intradermic injection" of tuberculin in very small doses and this experiment has been repeated successfully by several workers, notably Marfan, Carnot, Widal, and Benard.

A number of observers have maintained that in patients afflicted with such skin lesions as erythema multiforme, urticaria and the like, a reaction analogous to that obtained with tuberculin could be produced by the intradermic injection of diphtheria antitoxin, tetanus antitoxin and even with normal salt solution. Mlle. Pérel, together with Chauffard and Troisier, controlled their intradermic injections of tuberculin by the simultaneous injection of salt solution and the various sera, and in all but one case the control injection gave negative results.

Landouzy, in 1907, at the Congress of the French Association for the Advancement of Science, maintained that erythema nodosum was a local manifestation of a bacillary septicemia.

Chauffard and Troisier, in their intradermic experiments, were able to produce at the site of injection a nodule which, in all of its characteristics, appeared identical with the nodes in erythema nodosum. They believed that this experiment was evidence in favor of the theory that the plaques of erythema nodosum resulted from the conflict between the tubercle bacillus in the circulation and the antibodies which are present at certain points in the organism.

Otto Brian was able to demonstrate, by means of sedimentation with acetic acid and antiformin, in the venous blood of patients afflicted with erythema nodosum, an acid-fast bacillus, but excepting in one case he was not able to produce tuberculous lesions in guinea-pigs by injecting them with the blood in which these acid-fast bacilli occurred. He obtained positive reactions to the injection of tuberculin and to the von Pirquet skin test, but he did not think that this gave any proof that the erythema nodosum was as such of a tuberculous nature.

He concludes that: (1) The etiology of erythema nodosum is not uniform. (2) Tuberculosis is by no means the only cause of erythema nodosum; in fact, it is the cause apparently only in a small percentage of the cases. (3) The assumption that each case of erythema nodosum represents a rheumatic infection in special form is not well founded. (4) The throat is the portal of entry for the infection in many cases of erythema nodosum, but not for all.

Mlle. Péral in her thesis reports 22 cases in which a definite relationship existed between erythema nodosum and tuberculosis. Among these cases were several in which there was an apparent association between the erythema nodosum and tuberculous meningitis.

We offer the following report of a case of erythema nodosum which occurred as an early manifestation in tuberculous meningitis:

On January 24, 1910, there was admitted to the wards of the second medical division of Bellevue Hospital, a young Italian woman, aged twenty-five years. There was nothing in the family history nor in the past history which had any bearing on the present illness.

Two weeks before admission to the hospital she noticed an eruption on either cheek, occurring first as discrete papules and vesicles which shortly coalesced to form a continuous patch. The only subjective symptom at that time was the slight itching which accompanied the eruption. A few days later there appeared on the arms and on the legs numerous bright red spots and on the anterior aspect of the legs several hard, raised nodules, which were excessively tender on palpation. With the appearance of these nodules the patient complained of a general feeling of lassitude, anorexia, fever and pains in the joints, especially in the knees. The chief complaints on admission were the eruption on the face and limbs, fever, malaise, and arthritic pains.

The physical examination on admission showed a well-developed and well-nourished young woman, aged about twenty-five years, who did not appear to be very ill. The temperature was 100.5°, the pulse rate was 96, the respirations 24 per minute. The skin over the cheeks and to a lesser extent over the forehead was reddened, thickened and scaling. The right pupil was slightly dilated, both pupils reacted promptly to light. The conjunctivæ were normal. The tongue was thickly coated. The throat was normal. The tonsils were not hypertrophied. The teeth were in good condition, there was no pyorrhea. The cervical glands were somewhat enlarged.

The chest was well developed. The heart and lungs were normal. No masses were made out in the abdomen. The liver, spleen, and kidneys were not palpable.

The skin over the chest, back, and abdomen was clear. Over the extensor surfaces of the forearms, and especially marked in the vicinity of the wrist joints on either side, there were noted a number of discrete macules, violacious in color and irregular in outline, varying in size from that of a ten cent piece to that of a silver dollar. In some of these spots the color disappeared on pressure, while others were distinctly purpuric. Over the anterior aspect of the tibiæ and ankles an eruption similar to that described on the arms was seen and, in addition, over the thighs and legs and having no direct relation to the joints, there were noted several raised, red, sharply circumscribed nodules, varying in size and excessively tender on palpation.

The patellar reflexes were normal. There was no general glandular enlargement. Some tenderness was elicited by pressure over the lateral aspect of the knee-joints. There was no effusion into any of the joints.

The blood examination on admission showed: hemoglobin, 90 per cent.; white blood cells, 10,000; differential count: polymorphonuclears, 77 per cent.; lymphocytes, 17 per cent.; transitionals, 6 per cent.

The urine examination showed a specific gravity of 1034, no albumin, no sugar, no indican. On microscopic examination a few epithelial cells, a few white blood cells, and very rarely a hyaline cast were found.

The case then presented on admission: An erythema multiforme on the face and on the extremities accompanied by an erythema nodosum.

During the first three weeks of the patient's stay in the hospital there was no change in the condition. The temperature varied between 99° and 103° F. The eruption on the face gradually cleared up. During this time several crops of nodes appeared.

On February 18, twenty-five days after admission, the patient said that she felt well and that she desired to leave the hospital. No new nodes had appeared for several days. There was no longer any pain in the joints. The erythema had entirely disappeared and the purpuric eruption on the arms and legs was fading rapidly. Her malaise and anorexia had entirely disappeared, and her appetite was good. One symptom alone remained unchanged, namely, the fever, which continued to run a remittent course, varying between 99° and 101° F. A blood culture made on February 24 was negative. On February 26 the patient complained of pain in the epigastrium. This was followed by persistent nausea and vomiting. She became drowsy and apathetic, taking no interest in her surroundings. An ophthalmoscopic examination at this time showed a perfectly normal fundus; there was no choking of the disks.

For the next week the nausea and vomiting continued, there was a total inability to retain food. The patient lost in weight rapidly. The temperature continued to be remittent in type. The pulse was rapid, irregular, and of low tension.

On March 2 the patient developed a slight cough, and on examination of the lungs at this time there was discovered over the base of the right lung behind, dulness on percussion, prolonged and high-pitched expiration, bronchial voice, and many medium moist rales.

A blood count done at this time showed: hemoglobin, 60 per cent.; white blood cells, 13,000; differential: polymorphonuclears, 74 per cent.; large mononuclears, 14 per cent.; lymphocytes, 11 per cent.; transitionals, 1 per cent. A spinal puncture was performed and 7 c.c. of slightly turbid fluid under moderate pressure were withdrawn. The report from the laboratory was that the fluid was "negative for tubercle bacilli." A cyto-count was unfortunately not made.

There was now a marked change in the patient's condition. She had become extremely restless; there was an almost continuous cephalic cry; the head was retracted and the neck was rigid. The pupils were dilated and irregular. A convergent strabismus was present. The ophthalmoscopic examination revealed a double choked disk. No tubercles of the choroid were observed. The face was somewhat flattened on the right side, the mouth was drawn to the left and the tongue deviated sharply to the right. A well-marked *tache cerebral* was present. A marked Kernig's sign was elicited. The patellar reflex on the left side was absent and diminished on the right side. The respirations had assumed the Cheyne-Stokes type. The pulse was rapid, weak, and irregular. On lumbar puncture 44 c.c. of clear fluid were obtained under considerable pressure and the presence of tubercle bacilli was demonstrated in this fluid. The patient died on March 10.

The autopsy findings were as follows: Tuberculous lymph adenitis of the cervical and mediastinal glands. Tuberculous bronchitis and bronchopneumonia involving the right lower lobe. Localized miliary tuberculosis of the right lung. Tuberculous meningitis. Brown atrophy of the heart. Parenchymatous degeneration of the kidneys. Otitis media involving the right ear.